

HSIN-AI-CH'UN BUILDING IN KWANGCHOW REPRESENTS PROGRESS  
IN CONSTRUCTION TECHNIQUES

Modern Housing Construction

As the socialist construction advances, economy develops and the standard of living improves, a large scale construction and renovation of housing is being carried out to improve the housing situation of the Chinese people. For example, 50 to 60 new housing projects are being established in Peiping. Shanghai constructed over 8,000,000 cubic meters of workers' homes since the liberation. Over 200 large barrack districts (former slum quarters) in old Shanghai have been greatly improved for one million workers and their families. Most of the housings are of 4 to 5 story structures. These modern buildings have extended to farming, fishing and pasture areas. During the past several years, pre-cast concrete housings have been propagated into Henan, Chekiang, Kiangsu, Anhwei and Hopeh Provinces. During 1962 to September 1965, 11,500 pre-cast concrete homes in farm villages were built in Kiangsu Province alone.

During the early part of 1966, the Kwangchow City decided to rebuild all wooden structure homes to brick buildings within one to two years. The City had already renovated over 500 homes during January through March. Funds, designing and work on renovation of homes <sup>are being</sup> ~~were~~ supplied by the workers themselves. Difficult undertakings are ~~either~~ <sup>either</sup> being supported by the people or by the government. The cost per cubic

meter is only about 15 yuan.

#### Ten Great Constructions in Peiping

Housing projects take up most of the construction work but other constructions such as the People's Assembly Hall in Peiping are also going on. This large People's Assembly Hall covering over 170,000 square meters of floor space was constructed in ten months in 1959 to commemorate the tenth anniversary of the founding of the Chinese People's Republic. This hall can accommodate 10,000 people and in addition has a dining or banquet room for 5,000, ~~and~~ an all marble central lobby, conference room and a rest room. In addition, Peiping ~~has~~ built Chinese People's Revolutionary Army Museum, Chinese Revolutionary Museum, Chinese Historical Museum, All China Agricultural Exhibit Hall, People's Cultural Palace, New Peking Station totaling ten ~~representative~~ buildings representing the new construction of China.

In recent years, a great progress has been made in construction materials, building methods and engineering equipment. High grade cement, light weight blocks ~~manufactured~~ using <sup>A</sup>FRIASSHU [phonetic] and slug, large panels, low alloy -high tensile strength steel materials and plastics ~~are~~ being mass produced. Construction techniques in all fields have improved rapidly.

#### 18 Story Hsin-ai-ch'un Building

This 18 story Hsin-ai-ch'un Building is built along the bank of

the Pearl River in Kwangchow. It is located on the east of the old Ai-ch'un Building, which is near the Chinese Export Goods Exhibit Hall. The new Ai-ch'un Building covers an area of 12,000 square meters which is over 4,000 square meters larger than the old Ai-ch'un Building. The new building is three story higher. Although the new building is built separate from the old, passage ways are built connecting the two buildings from the second to the eleventh floors (except 4th).

The New Ai-ch'un Building was built primarily for the convenience of the people. The first impression is the bright and spacious hall at the entrance. It is adorned mainly in gold and white. Travel agency, bank and postal service are located to the left of the hall. A barber shop is near the stairway and a resting room is located near the elevator.

#### Carefully Designed Guest Rooms

There are a total of 223 guest rooms in Hsin-ai-ch'un Building. Each guest room is equipped with a powder room, telephone and closets. Electrical wirings and piping are not exposed. There is a wide passage way between the bedroom and the powder room. Folding screen is placed in the passage way. The rooms are not too large nor is it small. A large glass window is located between two posts. Lighting and ventilation are good. A window sill is higher than the height of a table and one can get a nice view of the Pearl River while sitting on this sill. ~~Guest rooms on northern side are also well lighted and ventilated~~ Lighting and

ventilation condition in guest rooms on the north side are also good.

Guest rooms are available up to the 12th floor. The dining room is on the 13th floor which connects with the 11th floor dining room of the old Ai-ch'un Building. This large dining room faces the Pearl River and is equipped with 50 tables. The 14th floor has a flower garden type small dining room which is connected directly with an elevator. An open air garden with miniature mountain and lake is located in front of this small dining room. An entire view of Kwangchow City can be seen.

A circular tower with pillars takes up from 15th to the 18th floor. The 15th floor is a resting hall, the 16th an elevator engine room and the 17th is an observation room overlooking the entire city.

#### Design Changed to Go Higher than Old Building

Employees of the Kwangchow Housing Construction Company took charge of the construction of the new Ai-ch'un Building. In the original plan the height of the new building was to be 16 story. However, they all decided that "the new building built under the new society must be higher than the old building of the old society." This view was supported by the Kwangchow leaders. Architects eliminated the unnecessary adornments and increased the height to 18 stories without increasing the basic cost of total investment.

#### Completed in 1/3 the Time Required for Old Building

Another feature of the Hsin-ai-ch'un Building is the speedy const-

ruction and the quality of workmanship. The completion of the new building from designing to actual construction required less than one year. The old building required from 1931 when the designing started to the summer of 1937. In other words, it required three for designing and another three years for actual construction or a total of six years. In order to complete the work in 10 months, designing and the preparation for construction were carried out almost simultaneously. Effective use of time saved unnecessary waste of money. The original plan called for the use of ferro-concrete piles as in the old building but was decided to use pre-cast concrete instead because of the difficulty in testing the underground condition for the piles. Driving piles near the old building was considered not too safe; therefore, a "sinking" method was used. Ground where piles were to be sunk was dug until an underground rock foundation appeared. Then the three concrete pipes were ~~sunk~~, placed, reinforced with steel and concrete "driven in." The anti-earthquake wall and designing of the top floor were proposed by the workers <sup>involved in the</sup> and construction ~~people~~.

Vertical Variation only 3mm

There were many difficulties in the overall construction work because of the height of the building, strictness of quality and the shortness of time. However, workers and engineers of the Kwangchow Housing Construction Company were full of confidence although previously engaged only in repairs of homes. The work progressed rapidly

but the difficulty increased as the building went higher. Over 8,000 tons of crushed stones, cement and steel reinforcement were needed for the entire building. In order to transport these materials, two small winches were assembled, 9 meters long hoist was built to move large steel materials. They also connected old pipes and made towers over 70 meters high to raise concrete to working level.

Quality of work remained good, especially the surveying and measuring were very accurate. After the completion of the project, the vertical variation was only 3mm, which is 1/6 of the variation allowed in the plan.

Materials and Equipment All Domestic Product

The old Ai-ch'un Building was designed by two architects invited by the capitalist group of "Ai-ch'un Life Insurance Company" thirty five years ago and the building was built by a foreign company. All basic and framework materials were imported, for example, steel piles from England, reinforcing steel from France and elevators from the United States. Spiteons to forks and knives have markings of foreign firms. The only materials provided by China were the gravels and bricks and the cheap Chinese labor.

However, all materials totaling 18,000 tons used in the new building and over 99% of the facilities used were produced in China. As a matter of fact, majority were produced in Kwangchow. For example, all the cement and 60% of the steel materials were produced in Kwangchow. The new building is equipped with two direct current high speed automatic elevators, which are 0.4 meter per second faster than the US made elevators used in the old building and run at 1.7 meters, <sup>these were</sup> made by the Tientsin Elevator Company.

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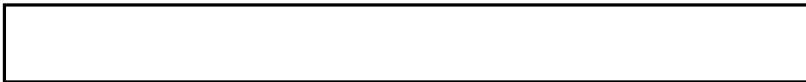
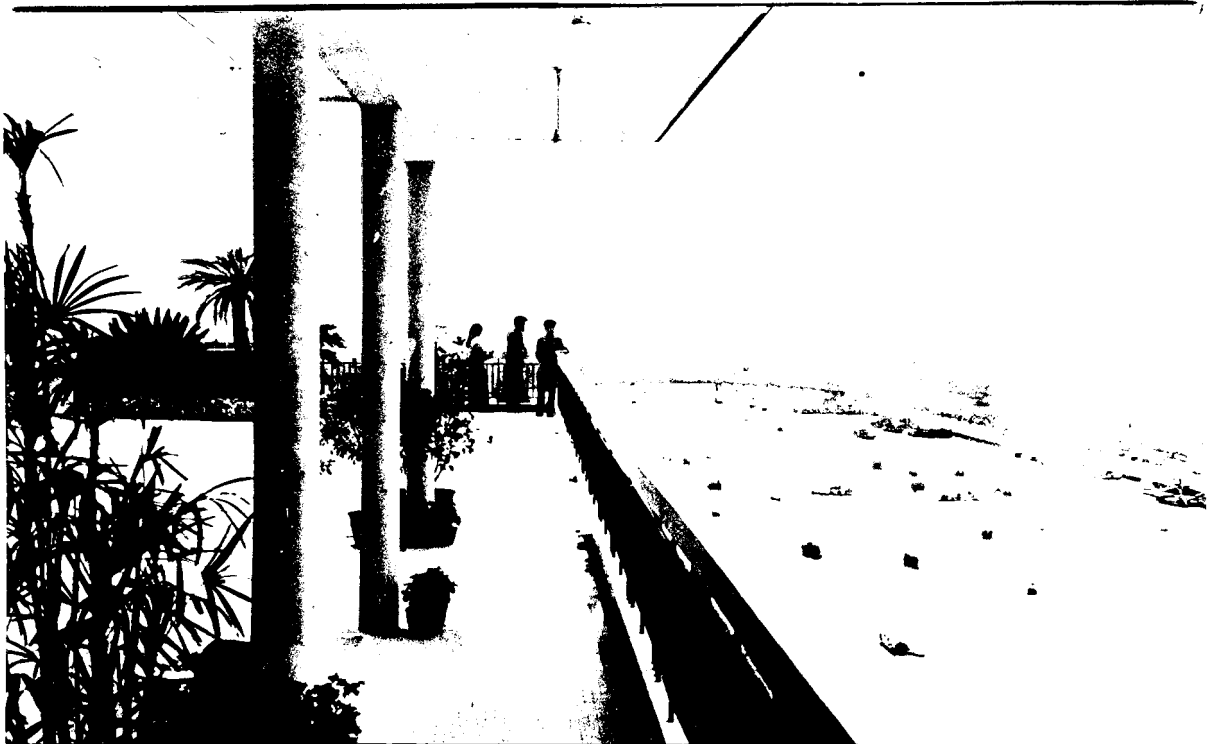
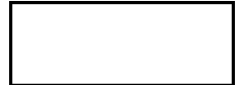
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View of the city from the 14th story of ~~Ai-ch'un~~ New Ai-ch'un Building



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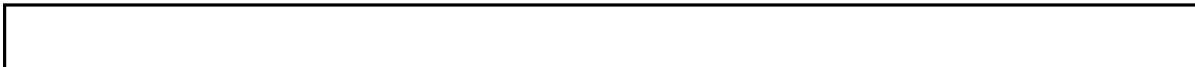
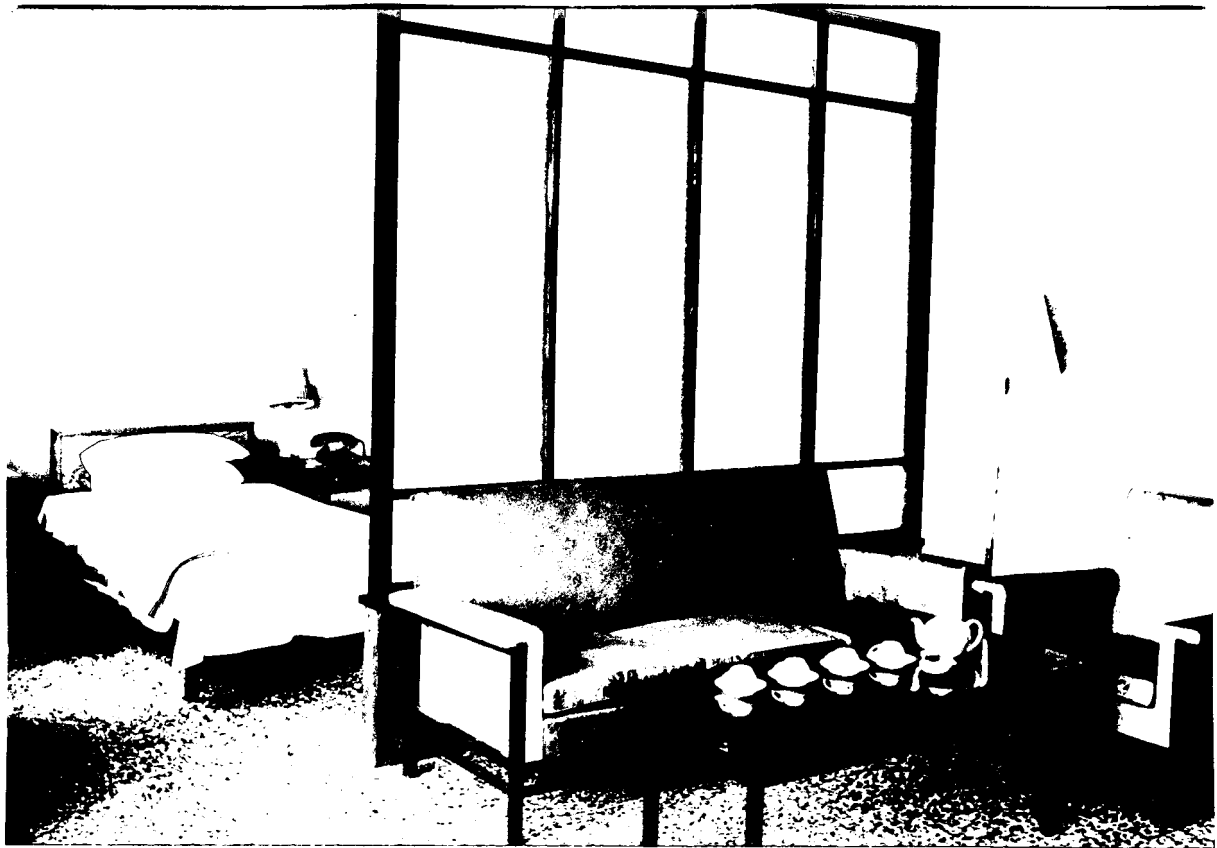
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Guest rooms such as this are bright and comfortable to please the guests.

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New Li-ch'un Building in Kwangchow was completed in April 1966 to accomodate foreign visitors to the Chinese export goods trade conferences. Large dining room is one of the facilities available.

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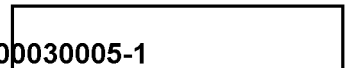
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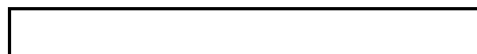
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Resting room of the New Ai-ch'un Building

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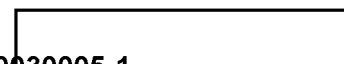
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CHINA [REDACTED] KUANG-CHOU 23 07 N 113 17 E  
Ai-chun Hotel. Newly constructed extension (RT). 1966.  
Confidential (7,10,29)

[REDACTED]  
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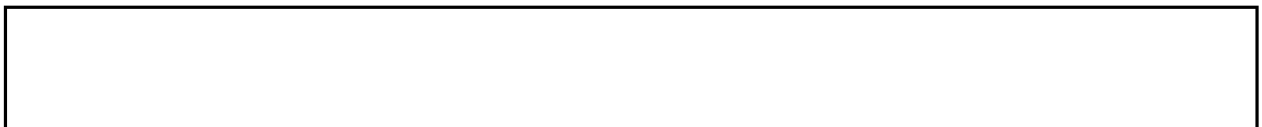


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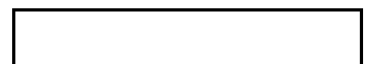


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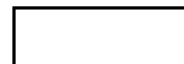
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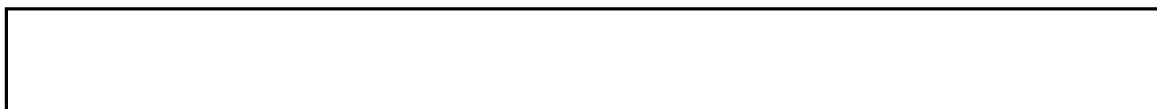
Newly constructed oxygen "upper blowing" revolving furnacesteel making  
plant of Shih-ching-shan Iron and Steel Company in Peiping

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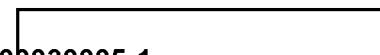
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Young people of Shanghai Iron and Steel Institute developed a technique for high speed processing of cold roll silicon steel by use of continuous furnace. The magnetic, insulating, voltage proofing and rust proofing characteristics of the cold roll silicon steel have either equaled or surpassed those of foreign products. Motors and transformers made out of this type of steel reduce the volume in half as compared to those built out of hot roll silicon steel. Photo shows heat treatment of cold roll silicon steel by continuous furnace.

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CHINA [REDACTED] CHUNG-CHING IRON & STL PLT #1 29 29 N 106 30 E  
Steel plates being loaded into freight cars for shipping. 1966.

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[REDACTED]  
Confidential

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CHINA [REDACTED] TA-YEH 30 05 N 114 58 E  
Power shovel loading iron ore into lorry cars. 1966.  
Confidential (12)

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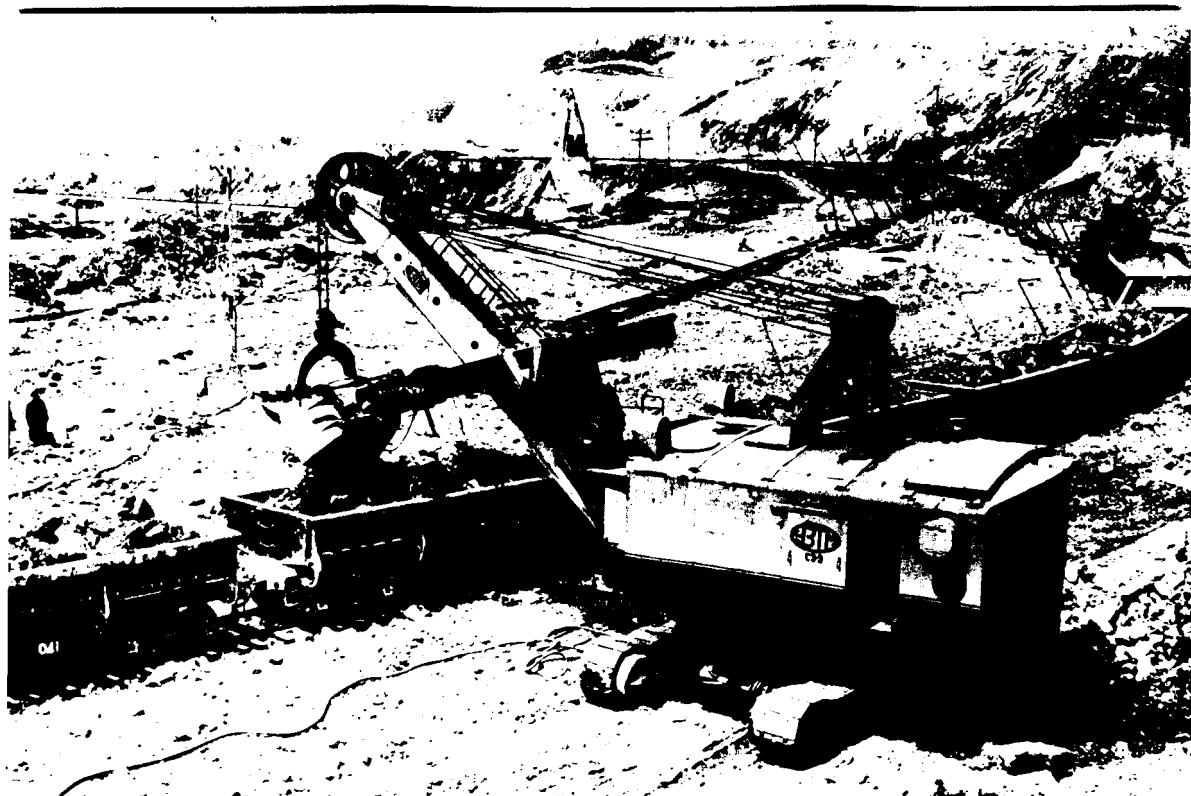
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CHINA [REDACTED] SU-CHOU 31 19 N 120 37 E  
Conveyor used to transfer ore from Tan-shan-liu iron mine. 1966.

[REDACTED]  
Confidential

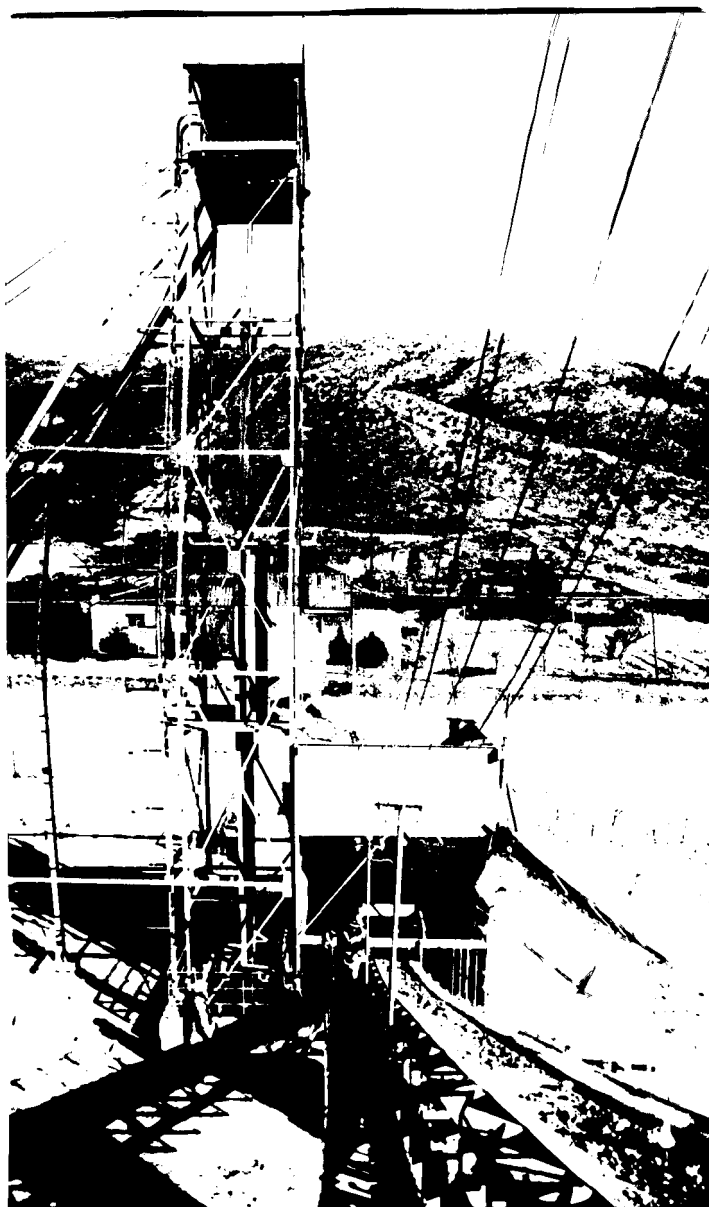
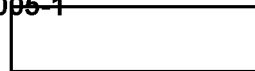
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CHINA [REDACTED] AN-SHAN IRON & STL PLT #1 41 08 N 122 59 E

Seamless steel tube plt. 1966. [REDACTED]

Confidential

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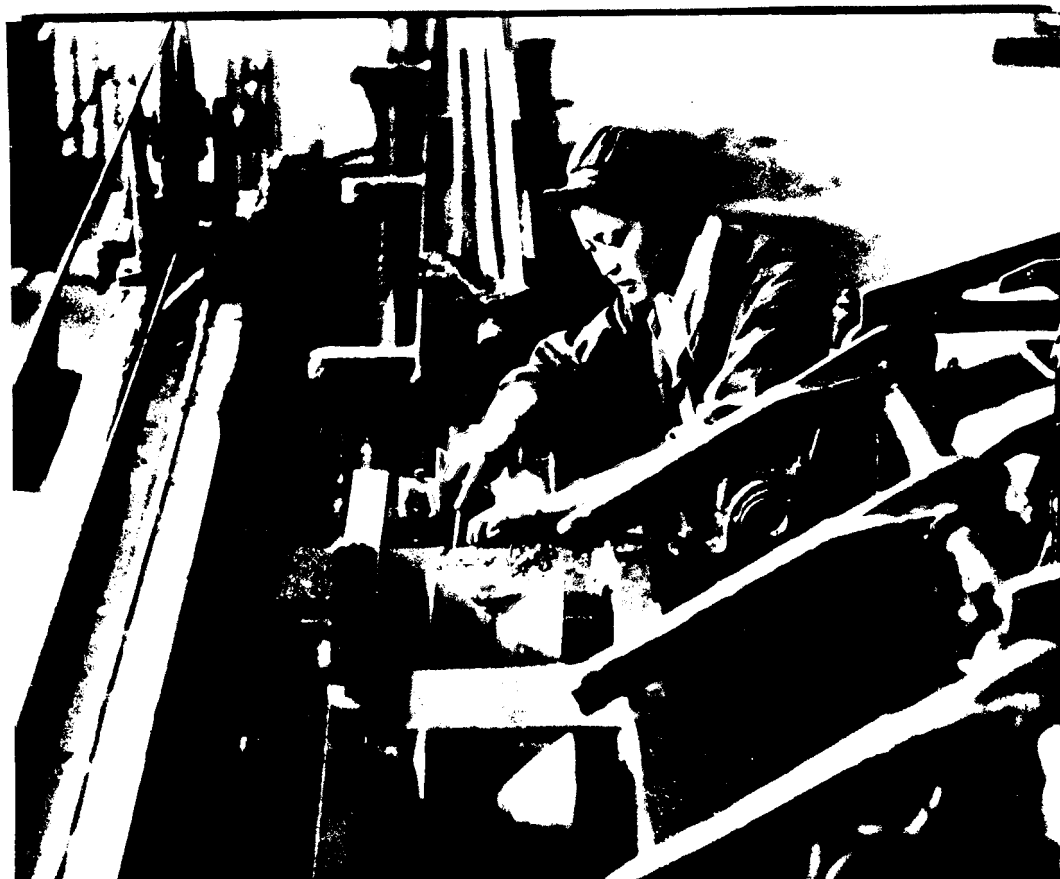
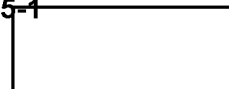
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